

Zacks Small-Cap Research

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Steven Ralston, CFA

312-265-9426

sralston@zacks.com

scr.zacks.com

10 S. Riverside Plaza, Chicago, IL 60606

Theta Gold Mines Limited (TGMGF-OTCQB)

Gravity survey of existing tailing dam completed, a prerequisite for the initiation of construction work

Based on a calculation of fully diluted share value of attributable resources, which uses the most recent financial statements and studies/reports on the company's projects, a target of US\$0.71 per share is indicated.

Current Price (07/16/21) \$0.17
Valuation \$0.71

OUTLOOK

Theta Gold Mines is **on the verge of transitioning** from a junior exploration company **to a gold producer**. By targeting high-grade, near-surface gold reef deposits in the brownfield Pilgrims Rest and Sabie Gold Fields in South Africa, management plans to **employ modern mining and gold processing techniques** to produce over 350,000 oz. Au through the initial development of three near-surface mines (Beta, Frankfort and CDM) of the 43 historical mines held by the company situated in the Eastern Transvaal Gold Fields. Furthermore, through multiple exploration campaigns, the company's **Total Mineral Resource has increased by over 100%** over the last four years.

SUMMARY DATA

52-Week High \$0.48
52-Week Low \$0.01
One-Year Return (%) N/A
Beta -0.23
Average Daily Volume (shrs.) 63,257

Shares Outstanding (million) 503.25
Market Capitalization (\$mil.) \$85.55
Short Interest Ratio (days) 0.20
Institutional Ownership (%) 6.5
Insider Ownership (%) 9.5

Annual Cash Dividend \$0.00
Dividend Yield (%) 0.00

5-Yr. Historical Growth Rates
Sales (%) N/M
Earnings Per Share (%) N/M
Dividend (%) N/M

P/E using TTM EPS N/M
P/E using 2021 Estimate N/M
P/E using 2022 Estimate N/M

Risk Level Above Average,
Type of Stock Small-Value
Industry Mining -Gold

ZACKS ESTIMATES

Revenue

(in millions of \$)

	Q1 (Sep)	H1 (Dec)	Q3 (Mar)	H2 (Jun)	Year (Jun)
2019		0 A		0 A	0 A
2020		0 A		0 A	0 A
2021		0 A		0 E	0 E
2022					

Earnings per Share

(EPS is operating earnings before non-recurring items)

	Q1 (Sep)	H1 (Dec)	Q3 (Mar)	H2 (Jun)	Year (Jun)
2019		-\$0.007 A		-\$0.009 A	-\$0.016 A
2020		-\$0.013 A		-\$0.000 A	-\$0.013 A
2021		-\$0.006 A		-\$0.007 E	-\$0.013 E
2022					

Quarterly EPS may not equal annual EPS due to rounding

EXECUTIVE SUMMARY

Management provided a **development update** at the beginning of July.

Gravity Survey of Tailing Facilities

In preparation for construction activities to begin on the tailings dam, a **gravity survey** encompassing the **existing tailings dam and the area of its planned extension** was completed in May 2021. The South Africa National Standard 1936 requires a gravity survey prior to commencement of any construction work on the tailings dam.

Gravity Survey Grid Tailing Facilities and proposed extension



Theta Gold Mines Press Release July 1, 2021

Surface Sampling at the Tailings Dam of the Rietfontein Mine

Recently, surface sampling of **Rietfontein tailings dam** was undertaken. The Rietfontein tailings dam was systematically sampled on a 50m by 50m grid to a depth of 8 meters. Ten-kilogram bulk samples were collected from each of the 55 holes and shipped to a SANAS (South African National Accreditation System) approved gold laboratory. Currently, the tailings dam at Rietfontein is in the company's resource estimate.

Dune & Dump Surface Sampling at the Tailings Dam of Rietfontein Mine



Theta Gold Mines Press Release July 1, 2021

Survey of Southern Section of the Beta Mine

The **southern section of the Beta Mine** was surveyed. Certain markers were identified, which will allow current mines plans to be spatially superimposed on historical mine maps and prior sampling information. Contemporary confirmation sampling of historical samples would allow those historic stope samples to be included in future resource estimates. Currently, the southern section of Beta Mine is in the company's resource estimate.

Progress on Refurbishing the Gold Processing Plant

Management is working on refurbishing the historic gold processing facility. Management plans on decommissioning certain components, salvaging others and installing new equipment in its effort to construct a new gold processing plant on the already-approved plant & tailings facility footprint.

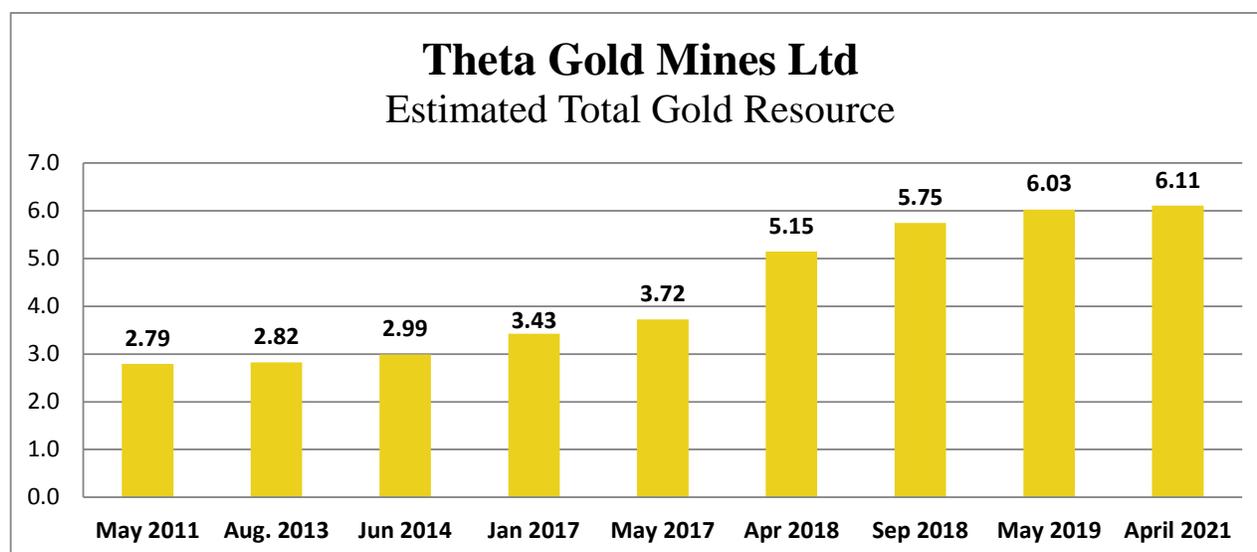
The absorption and CIL tanks have been pumped out and cleaned for inspection. During the third quarter, a structural engineer will conduct an assessment of these tanks in terms of stability and thickness in order to determine whether they can be reconditioned.

The purchase inquiries of long-lead-time, crushing circuit and pre-concentration equipment have been confirmed; however, additional metallurgical optimization work is required in order to determine the final process design, particularly in terms of carbon float recoveries.

Recent Milestones

April 8, 2021 Maiden underground mining reserve
April 13, 2021 Pre-Feasibility Study on underground reserve
May 2021 Gravity survey completed of tailing dam and planned extension area

A **Maiden Underground Mining Reserve** and **Pre-Feasibility Study** (PFS) for the near-surface, underground Beta, Frankfort and CDM (Clewer, Dukes & Morgenzon) mines were released in mid-April. The work for the completion of the PFS contributed to a significant increase in the company's Ore Mine Reserve. In addition, the company's **Total Mineral Resource** (Measured, Indicated, and Inferred) **has increased to 6.105 million oz Au.**

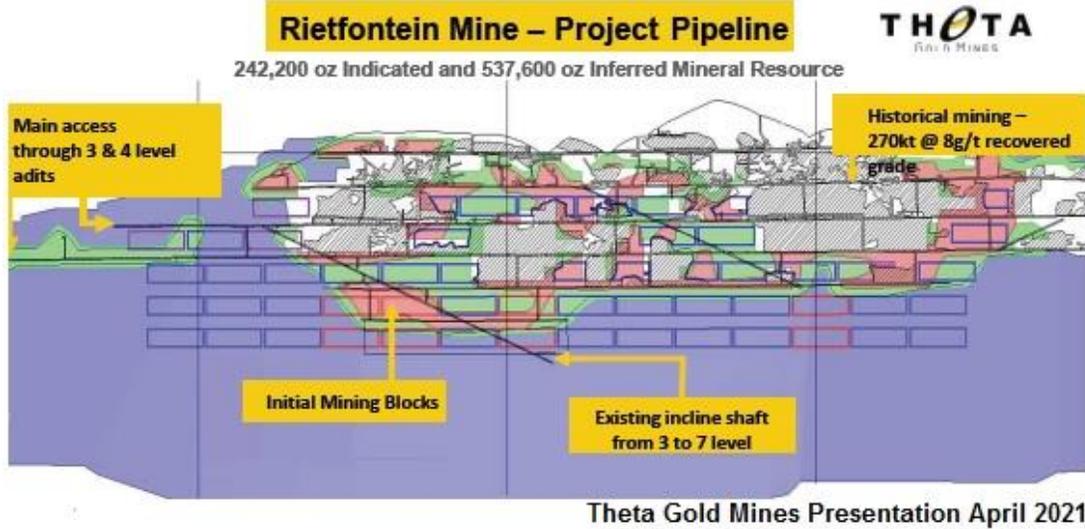


Timetable of Upcoming Milestones

1Q 2022 DFS on the Underground Project (Beta, CDM and Frankfort Mines)
TBA PFS on the Rietfontein mine, upgrading the Scoping study

PFS Project – Rietfontein Mine

Management is planning a **Pre-Feasibility Study** on the **Rietfontein Mine.**, building on the Scoping Study completed in February 2017 and revised in September 2018. Currently, the estimated Mineral Resources at the Rietfontein Mine are 242,200 oz gold (grading 8.2 g/t Au) in the Indicated category and 537,600 oz gold (grading 14.0 g/t Au) in the Inferred category. As with the Beta, Frankfort and CDM Mines, management believes that **a significant percentage of the Indicated Resource can be upgraded to Reserve status.** It is expected that the PFS would be additive to Theta’s Mining Reserve and hence, would further increase the company’s potential production profile.



AUSTRALIAN SECURITIES EXCHANGE (ASX) - SUMMARY DATA

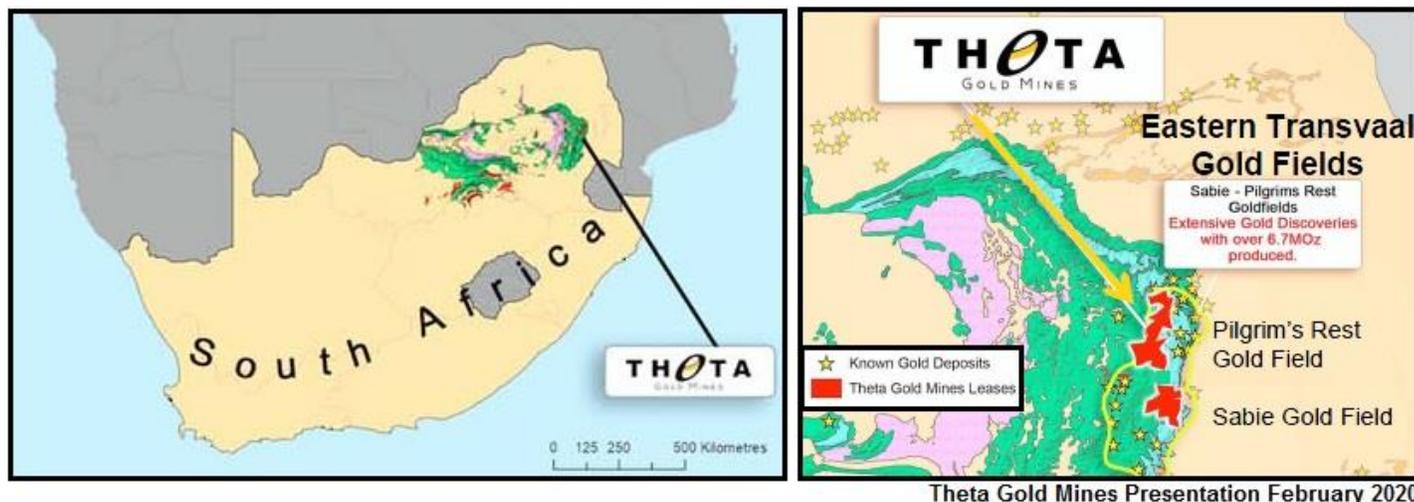
Theta Gold Mines Limited			
ASX: TGM			
Current Price	AUD 0.245	Average Daily Volume (shrs.)	241,003
52-Week High	AUD 0.40	Shares Outstanding (million)	503.25
52-Week Low	AUD 0.17	Market Capitalization (million)	AUD 123.30

KEY POINTS

- Theta Gold Mines (OTCQB: TGMGF, ASX: TGM) is a junior gold development company **on the threshold of becoming a gold producer**.
- The company holds mining rights encompassing **62,000 hectares** (620 km²) situated in the **Eastern Transvaal Gold Fields** of northeastern **South Africa** that contain 43 historical mines.
- Management is implementing an **Integrated Mine Strategy**
 - **Phase 1** consists of mining the near-surface **underground** mineral reserve at the **Beta Mine** (MR83)
 - **Scoping Study** completed with an estimated **resource** of **1.003 million oz. Au** (6.75 g/t)
 - **Maiden Ore Reserve & PFS** completed in April 2021
 - Estimated **Underground Reserve at Beta is 347,940 oz. Au** (1,662 Kt with an average grade of 6.51 g/t)
 - Adding Frankfort & CDM mines brings Total Underground Reserve to **418,850 oz. Au**
 - Although the Phase 1 underground mines are already permitted in most respects, **an amended mine works program** and related **environmental authorizations** will be submitted for approval by the regulatory agencies.
 - **Phase 2** is to develop the project of the **underground** resource at the **Rietfontein Mine** (MR358 and MR10161)
 - **Scoping Study** completed with **estimated resource of 779,800 oz. Au** (8.42 g/t)
 - Management expects to have a **PFS on the Rietfontein Mine** completed by the end of the third quarter of 2021
 - **Ongoing project** that targets shallow, **near-surface, high-grade gold reef deposits** around Theta Hill (in MR83), which is within 3km of the existing, fully permitted processing plant
 - **Scoping Study** completed
 - **Feasibility Study** completed
 - Environmental Authorization is required to advance the open pit project
 - **Follow-on project** targets shallow, near-surface deposits that are continuations of the mineralized reefs that extend into another mineral right (MR 341)
 - **Scoping Study** completed
- Theta Gold Mines owns an existing **CIL processing plant** with a 2.5 million-tonne **tailings storage facility**
 - A **ball mill** was acquired and delivered to the plant site. Management plans to upgrade its current nameplate capacity (820,000tpa) by adding a crusher. By reducing the feed size, throughput is expected to increase to **1.2 MMtpa**.
 - In January 2020, an optimized plant study was completed raising the planned operating capacity to 600,000tpa.
 - Management is working on securing the financing to refurbish and upgrade the CIL processing plant.
- The estimate of total (Measured, Indicated and Inferred) mineral resources has been expanded five times since 2017 from 2.99 million to 6.11 million oz. Au.
 - An innovative application of resource-type specific **3-D electronic geological models** helped upgrade the estimate for total Mineral Resources by 38% in April 2018
 - Multiple **drilling campaigns** have driven the other increases in total resources

OVERVIEW

Headquartered in Sydney, Australia, Theta Gold Mines Limited (OTCQB: TGMGF, ASX: TGM) is a junior gold development company **on the verge of transitioning to a gold producer**. The company controls a highly prospective area of **62,000 hectares** (620 km²) situated in the **Eastern Transvaal Gold Fields** of northeastern **South Africa** through its 74% ownership of Transvaal Gold Mining Estate Limited (TGME). Founded in 1895, TGME is first gold mining company incorporated in South Africa and holds nine mineral mining tenements in the **Pilgrims Rest Gold Field**, along with tenements in the **Sabie Gold Field**, both of which encompass 43 historical mines in the area.



Management's strategy is to develop two historically productive goldfields in the Eastern Transvaal Goldfield, the Pilgrims Rest Gold Field and the Sabie Gold Field. Management's development plan differs from prior attempts. Management's method is strongly based on the **optimization** of the project, not only with respect to initially **targeting higher-grade near-surface deposits**, but also by **optimizing the methods of both mining and processing**.

New Initiatives

Theta Gold Mines (formerly known as Stonewall Resources) acquired the TGME and Sabie Mines properties in 2010 and proceeded to develop them. After a brief period of extract gold from tailings dams, dumps and reef residue material from 2011 to 2014, there were conventional efforts to revive the Rietfontein Mine. In 2018, with a new management team led by Bill Guy, several innovative initiatives point to success for the current development plan.

- **Modern mining techniques** are going to be employed in order to deal with the challenges of extracting gold ore from the reef systems present in the Pilgrim's Rest and Sabie Gold Fields. Management talent with specific expertise in pursuing reefs has been brought on board to help execute management's strategy
- The exploration campaigns since 2014 have **increased Total Mineral Reserves by over 100%**
- Management plans to construct a **new, modern CIL (Carbon-in-Leach) plant** on the existing permitted footprint of the old plant, together with the planned refurbishment and upgrade of the old processing mill which includes the **implementation of modern gold processing techniques** to deal with the metallurgical challenges posed by the nature of sulfide ore in order to maximize gold recovery
- A new geological model was developed in February 2020 that better explains the origin of the gold deposit that should enhance the effectiveness of exploratory efforts in the future.

In January 2021, Theta Gold Mines acquired a **5% equity interest in Bullion Asset Management** through the issuance of 2,087,682 TGM shares (worth AUD\$700,000). The investment vertically integrated Theta Gold Mines up the precious metals value chain. Management foresees possible future synergies by collaborating with Bullion Asset Management.

Equity Developments

Nov. 2018 Consolidation of shares on a 10:1 basis
 Nov. 2019 TGMGF listed on OTCQB market
 July 2020 Theta Gold Mines Limited (OTCQB: TGMGF) became DTC eligible

In November 2019, the company's shares were admitted to the OTCQB market under ticker TGMGF. The company's primary listing is on the Australian Securities Exchange under the ticker TGM. In July 2020, TGMGF became DTC eligible, which facilitates electronic trading of the stock, particularly by individual investors.

MAIDEN UNDERGROUND MINING RESERVE

On April 8, 2021, Theta Gold Mines announced the company's Maiden **Underground Mining Reserve** for the **Beta, Frankfort and CDM** (Clewer, Dukes & Morgenzon) mines. Collectively, these underground deposits are now referred to as the **TGME Underground Project**. The Proved and Probable Underground Ore Reserves are estimated to be **418,850 oz gold** (2,366 Kt with an average grade of 5.49 g/t).

Combined with the Ore Reserves for Theta Open-Pit Project (160,610 oz Au grading at 2.31 g/t Au at a 0.4 g/t Au cut-off), the company's current **Total Ore Reserve** is **579,460 oz gold** (4,530 Kt with an average grade of 3.98 g/t).

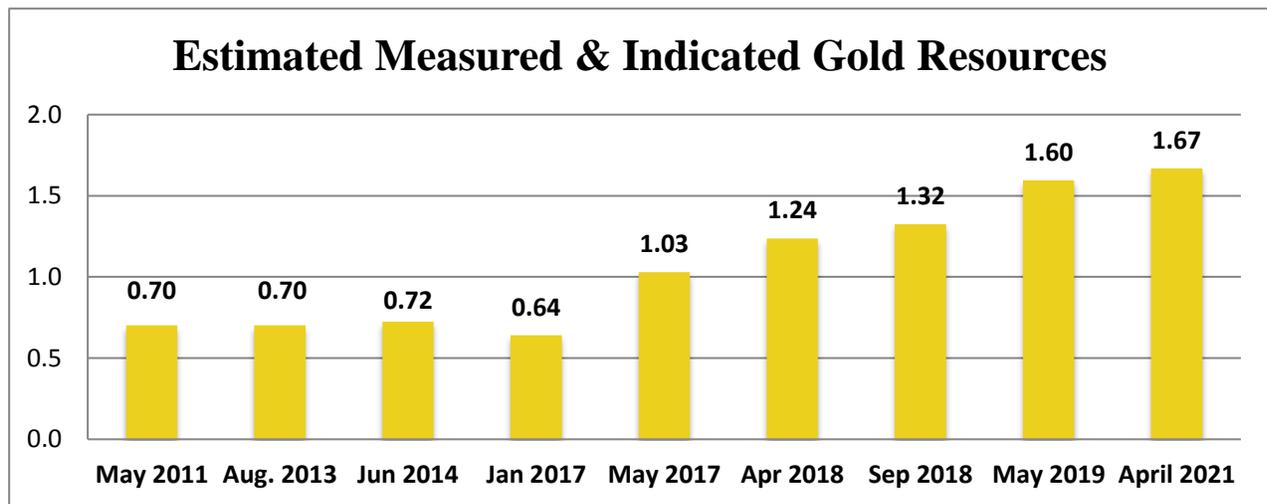
Combined Maiden Underground & Open Pit Ore Reserve

Operation	Grade	Tonnes	Au Content	
	g/t	kt	kg	koz
Beta	6.51	1,662	10,822	347.94
Frankfort	4.13	319	1,317	42.33
CDM	2.31	385	889	28.58
Open Pit (MR83)	2.74	2,164	4,996	160.61
Total	3.98	4,530	18,023	579.46

Theta Gold Mines Press Release April 8, 2021

The **Total Mineral Resource** (JORC 2012) increased slightly to **6.11 million oz Au** (45.5 Mt grading at 4.17 g/t Au) as the new underground reserve was derived from a **63% conversion of the Indicated Resource** in the easily accessible gold underground areas of the Beta Mine.

The upgrading of resources resulted in **Measured & Indicated Mineral Resources most recently increasing 4.6% to 1,668,200 oz Au** since May 2019 and **up 130% since June 2014**.



Roughly 95% of the Mining Reserve is situated within 3 km of the location of the central processing plant.

PRE-FEASIBILITY STUDY ON UNDERGROUND MINING RESERVE

The PFS includes details of the **modern mining methods** that should dramatically improve rate of production and the grade of the recovered ore, along with reducing development costs and waste rock.

Modern Mining Methods

Historically, conventional manual (mining by hand) **methods were utilized** to extract ore from gold reefs in the Eastern Transvaal Gold Fields. Manual operations are time-consuming with low levels of ore extraction. The potential use of normal-sized mining equipment is not economical due to the ore's average grade.

Modern methods employ mechanized equipment. In Theta's case, the preferred method for large scale underground mining of **large yet narrow, flat dipping gold reef systems** (which are prevalent at Pilgrims Rest and the Sabie Gold Fields) is **Mechanized Long Hole Stoping**.

Production drill holes can be selectively drilled by low-profile drilling rigs in a predetermined pattern that takes into account varying ore thicknesses and dips. Low-profile mechanized equipment can **accurately cut gold reefs**, in the 60-cm to 6-meter range, and in some cases, reef systems that are narrower than 60 cm.

The planned mining process entails drilling 15m long blast holes with five holes being blasted at a time. Thereafter, stope cleaning is completed with low profile scrapers or by waterjet. Load-Haul-Dump (LHD) equipment then loads and transports the ore to underground conveyor belt systems, which transport the ore to the surface. Executed properly, the planned daily advance should be three meters.

The result is **higher grade ore** since only the channel width of the ore body is mined. The end result of processing **higher grade ore** is that **cost efficiency per ounce improves dramatically**. In addition, since less ore is transported to the mill (like the **Sandvick low-profile LHD loader**), intra-mine **transportation costs are reduced**. Furthermore, an added benefit is that the life of the tailings dam is lengthened, since less ore and post-processing waste are produced.



Theta Gold Mines Presentation April 2021

Modern Gold Processing Methods

Modern gold processing techniques are expected to enhance the gold recovery rate, including ultrafine grinding and Intense CIL. Select results of a metallurgical study from a 450 kg bulk sampling program were announced in November 2020. Average gold recovery rates between 91% and 94% for some of the bulk composites from the Rietfontein, Beta and Vaalhoek Mines were well above management's expectations. Other metallurgical testwork was completed on the more complex ore from the Frankfort Mine. Based on the metallurgical testwork conducted to date, the PFS incorporates an expected recovery rate of 84%.

Management plans on upgrading and refurbishing the existing gold process plant in a flexible and modular manner so that it can accommodate a variety of ores, each of which requiring different treatment solutions. The front-end (crushing) and back-end (CIL, elution, gold room and tailings) infrastructure is to be shared.

Surface Infrastructure TGME Underground Mine Layout



Theta Gold Mines Quarterly Activities Report April 30, 2021

Initially, the components to process ROM ore from the Beta Mine will be completed, which will follow the configuration of a conventional CIL (Carbon-in-Leach) process. Initially, the existing tailings facility will be re-commissioned and utilized. Metallurgical studies will continue to be conducted in order to further refine the design.

By utilizing modern mining methods and gold processing techniques, the **All-In Sustaining Cost (AISC)** over the Life of Mine (LoM) is projected to be **only US\$905 per oz Au**, or in the bottom quartile for South Africa producers. The prior extensive development of these brownfield mines and the advantageous location of near-surface, high-grade gold reefs also contribute to the expected low cost status.

Management plans on constructing a new gold processing plant on the already-approved plant & tailings facility footprint and **initially producing at a rate of approximately 60,000 oz Au annually** from nearby ore sources through shallow underground hard rock mining. Longer-term, over the ensuing five years, management anticipates increasing production rate to 160,000 oz Au annually from six mine locations.

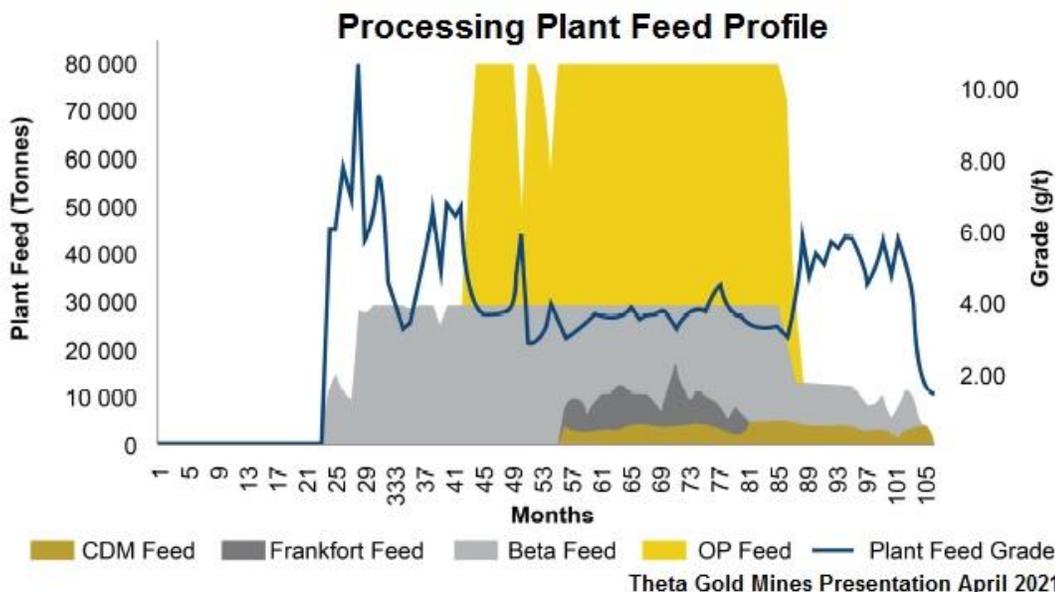
Utilizing the Maiden Mineral Reserve, the PFS estimates that the **Beta, Frankfort and CDM mines** can recover **353,012 ounces Au** over a **Life of Mine (LoM) of 7.67 years**, assuming an 84% process recovery rate of the 418,845 ounces Au ROM ore. Total capital costs are estimated to be US\$78.5 million. The **IRR** (at a 5% discount rate) is estimated to be **82%** at a gold price of US \$1,570 per ounce. The average LOM **all-in sustaining cost** (operating costs and capital expenditures) is calculated to be **US\$905 per ounce Au**.

PRE-FEASIBILITY STUDY – TGME PHASE 1 UNDERGROUND PROJECT

UG Operations	Unit	Base Case US\$1570/oz	Gold price US\$1800/oz	Gold price US\$2000/oz
NPV @ 5%	USDm	91	132	166
Internal Rate of Return (IRR)	%	82%	111%	134%
Total Oz in Mine Plan	oz	418,845	418,845	418,845
Total Oz Recovered	oz	353,012	353,012	353,012
Average Payback Period (from Start of Mining)	Months	22	17	16
Peak Funding Requirement	USDm	36	36	36
EBITDA over LOM (Undiscounted)	USDm	241	318	382
All-in Sustainable Costs (AISC)	USD/oz	905	926	942
Gold Price	USD/oz	1,570	1,800	2,000
Exchange Rate	ZAR/USD	15.89	15.89	15.89

Theta Gold Mines Quarterly Activities Report April 30, 2021

The PFS assumes ZAR/USD exchange rate of 15.9. The PFS anticipates a pre-production period of 23 months for rehabilitating existing and constructing new processing plant infrastructure, after which the pay-back period is estimated to be 13 months from the time the first gold is poured.



Although the Phase 1 underground mines are already permitted in most respects, regulatory approval for underground mining will **require amendments to the Environmental Management Plan and the Environmental Assessment Statement**. An amended mine works program and the related environmental authorizations will be submitted for approvals.

GEOLOGY OF EASTERN TRANSVAAL GOLD FIELDS

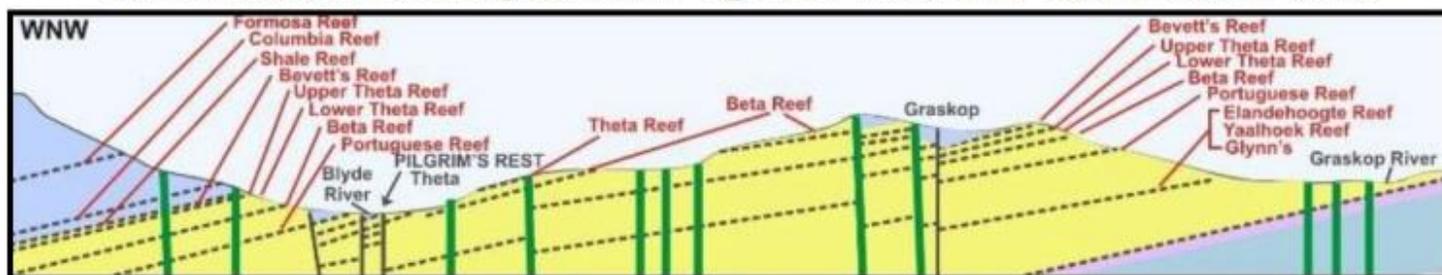
The **Transvaal Basin** is a large original basin, which consists of a succession of sedimentary rock depositions, roughly 12km in thickness. During the Neo-Proterozoic era, the intrusive **Bushveld Complex** (the main source of gold-bearing fluids) was emplaced within the sedimentary rocks of the Transvaal Basin resulting in epigenetic mineral deposits. The Bushveld Complex is the largest (67,000 km² or 25,900 sq. miles) layered igneous intrusion on the Earth's crust. The large, saucer-shaped Bushveld Complex hosts the world's greatest resources of platinum group metals (PGM).

The Mining Rights held by Theta Gold Mines are located within the Pilgrim's Rest and Sabie Gold Fields, which are situated within the **Eastern Transvaal Gold Fields**, which are spatially related to the igneous Bushveld Complex. Several other small epigenetic gold deposits have been discovered in the eastern Transvaal Basin; however, the significant mineralization in the restricted area of Pilgrim's Rest and Sabie is believed to a result of the pressure, heat and transportation of acidic mineralized fluids emanating from the emplacement of the eastern limb of the Bushveld Complex.

The gold mineralization found on Theta's properties display the characteristics of a **Carlin-type deposit**, namely epigenetic, sediment-hosted disseminated gold deposits grading between 1 to 20 g/t. Gold may occur in several forms, including free gold or gold telluride or may be associated with quartz veining. Due to the availability of economic concentrations of gold, Carlin-type deposits have been mined from both open pit and underground operations depending on the depth of the mineralization.

The sub-surface gold mineralization discovered in the Eastern Transvaal Gold Fields occurs as concordant and discordant reefs (veins), which have a NNE-SSW strike within host sediments of the Pretoria and Chuniespoort Groups in the Transvaal Supergroup (a South African stratigraphic term that refers to all rocks formed in the Transvaal Sedimentary Basin approximately 2.2 billion years ago). These **relatively flat-lying, gold-bearing reef systems** (dipping gently between 2° to 7° to the west) occur in different stratigraphic horizons within the sedimentary host rocks. **The most prolific recoveries have come from concordant bedding parallel reef horizons** comprised of narrow quartz-carbonate or quartz-sulfide veins. Such mineralized zones are usually are formed by an over-pressured fluid system, which is consistent with the Bushveld Complex emplacement theory.

Schematic of Reef System in Pilgrim's Rest and Sabie Gold Fields



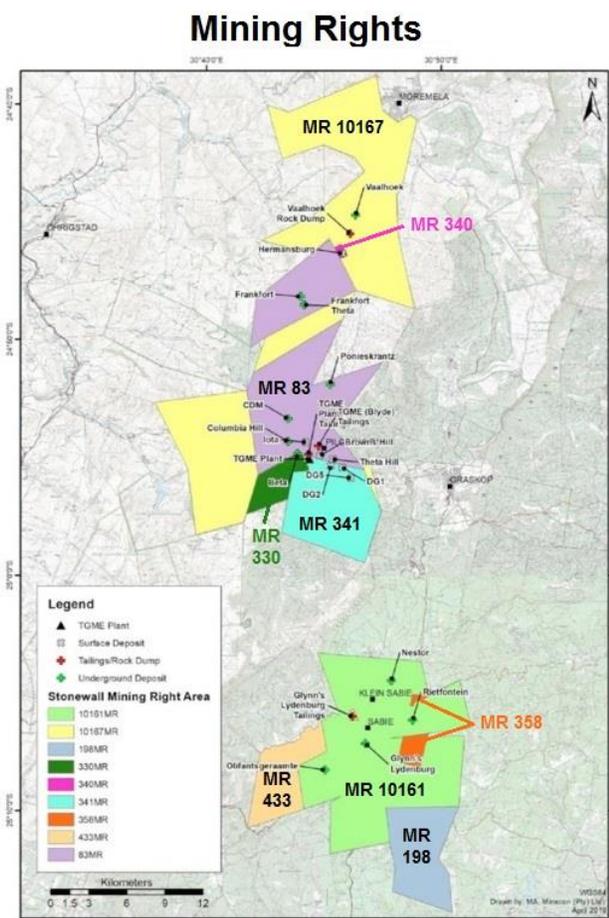
Theta Gold Mines (formerly Stonewall Resources) Presentation December 2016

LOCATION AND MINING RIGHTS

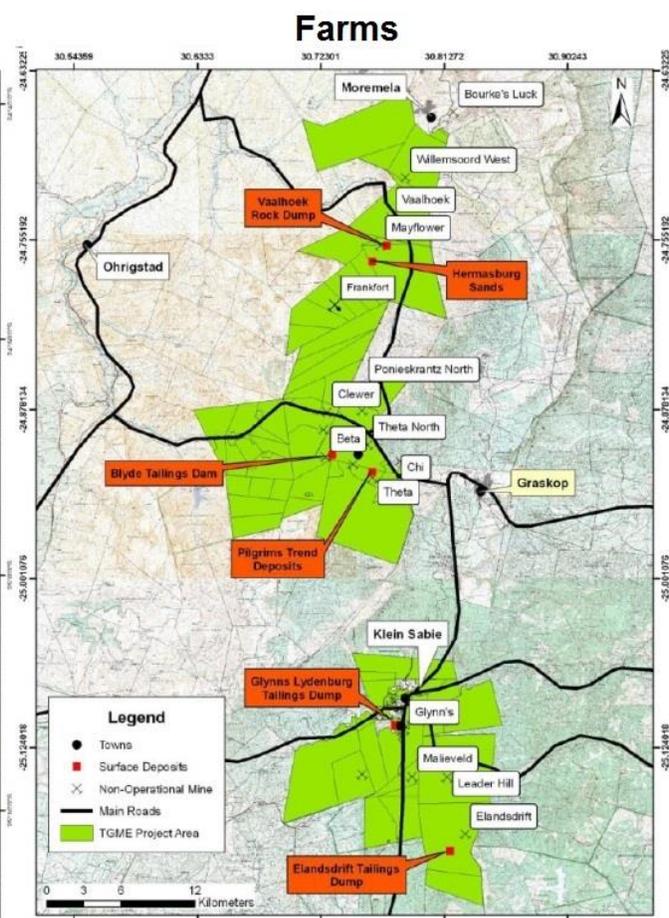
The gold mineralization tenements of Theta Gold Mines are located approximately 370 km northeast of Johannesburg in the vicinity of the towns of Pilgrim's Rest and Sabie. The Project area consists of **two blocks of contiguous tenements** that extend roughly 65 km in a north-south direction and 25 km east-west.

The block surrounding **Pilgrim's Rest** consists of **five mining rights** (north-to-south MR10167, MR340, MR83, MR330 and MR341). Often referred to as the **Northern and Central areas**, the most prodigious historical mines (each milling over 1,000,000 tonnes of ore) were Dukes-Clewer (1.79 MM tonnes of ore milled), Theta (1.68 MM), Vaalhoek (1.3 MM) and Columbia Hill (1.028 MM) mines.

The block surrounding **Sabie** consists of **four mining rights** (north-to-south MR10161, MR358, MR433 and MR198). Dubbed the **Southern section**, it is composed of the assets of Glynn's Lydenburg Ltd, which was acquired by TGME in 1955). Between 1895 and 1955, the Southern section (under the control of Glynn's Lydenburg Ltd) milled 3,428,000 tons and produced 1.241 million ounces of gold.¹ The historic **Rietfontein mine** milled 227K tons of ore that produced 65K oz. of gold and 36K oz. of silver (an average grade over 8 g/t), is the subject for a PFS in 2021.



Theta Gold Mines Presentation October 2020



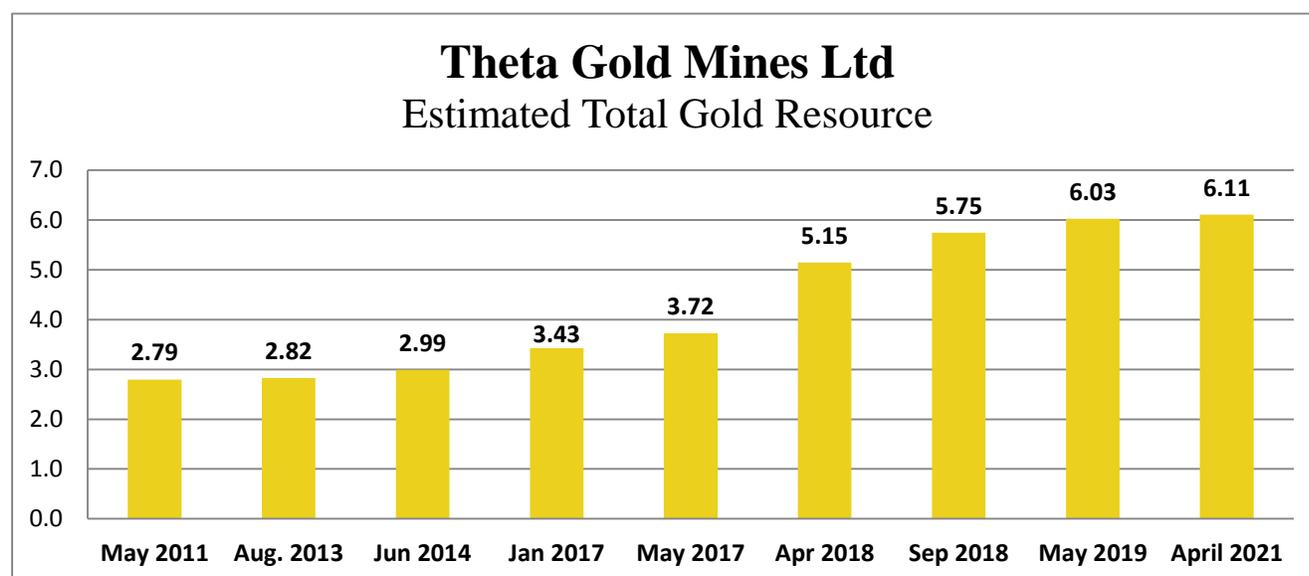
Theta Gold Mines (formerly Stonewall Mining) Competent Persons' Report April 2012

Theta Gold Mines Ltd							
Mining Rights	Farms				Select Historic Mines		
Northern & Central Sections (contiguous to the town of Pilgrim's Rest)							
MR 10167 (aka TGME)	Buffelsfontein Vaalhoek Desire	Granite Hill Klondyke Doomhoek	Willemsoord Sacramento Rotunda Creek	Manx Hermansburg Blackhill	Willemsoord Mine <i>Vaalhoek Mine</i> <i>Mayflower Mine</i>		
MR 340 (aka Hermansburg)	Hermansburg				Hermansburg Sands		
MR 83 (aka Greater TGME)	Frankfort Ponieskrans	Krugershoop Peach Tree	Morgenzon Van der Merwes Reef	<i>Dukes Hill Mine</i> Frankfort Mine <i>Clewer Mine</i> <i>Columbia Hill Mine</i> <i>Iota Mine</i> <i>Theta Hill Mine</i>			
MR 330 (aka Beta & Grootfontein)	Grootfontein	Grootfonteinberg			Beta Mine		
MR 341	Grootfontein						
Southern Section (contiguous to the town of Sabie)							
MR 10161 (Sabie)	Spitskop Sheba	Hendriksdal Vertroosting	Grootfontein Rietfontein	Waterval Olifantsgeraamte	<i>Rietfontein Mine</i> <i>Nestor Mine</i> <i>Olifantsgeraamte Mine</i> <i>Glynn's Lydenburg Mine</i>		
MR 358 (aka Rietfonein)	Waterval	Spitskop	Maliveld Valleie		Leader Hill Mine		
MR 198 (aka Elandsdrift)	Elandsdrift				Elandsdrift Mine		
MR 433 (aka Glynn's Lydenburg)	Grootfontein	Olifantsgeraamte					

Mine in italics - over 1 MM tonnes milled

GOLD RESOURCE ESTIMATES

In 2010, when Stonewall Resources (now named Theta Gold Mines) acquired TGME, which includes the Sabie Mines properties. The total (Measured, Indicated and Inferred) estimated mineral resource was 2.794 million ounces of gold. In May 2013, a Competent Person's Report (that included additional resources for Dukes Hill and the Beta Main Rock Dump) increased the estimated mineral resource to 2.823MM oz. Au. Over time, management has undertaken multiple drilling campaigns, which have resulted in upgrading the resource seven additional times, with the most significant increase occurring in 2018.



Recent Total Resource Upgrades

- April 2018 Increased Total Mineral Resources to **5.15 million ounces** from 3.72 million ounces
 - Driven by a geological modeling project
- Sept. 2018 Total Mineral Resources increased to **5.75 million ounces**
 - Added Maiden Resource on Theta Open-Pit Project
- May 2019 Increased Total Mineral Resources to **6.03 million ounces**
 - Added Ore Reserve on Theta Open-Pit Project
- April 2021 Increased Total Mineral Resources to **6.11 million ounces**
 - Added Ore Reserve on Maiden Underground Mining Reserve

Looking back at relatively recent prior increases in the estimated mineral resources, the 38% increase in resources to 5.147MM oz. Au in **April 2018** was driven by a **geological modeling project**, along with new open-cut discovery at **Vaalhoek** that was included in the estimated resource. The modeling project involved a **reinvestigation of the historical data** for the purpose of collating, capturing and digitizing the information from historic production and sampling since 1873 (along with 20,000+ meters of drilling results) and then **applying modern modeling and estimation techniques**. Also, during the process of reviewing historical information, additional historical sampling data was uncovered.

Not only did the modeling project incorporate the use of **3-D electronic geological models**, but also four types of digital 3-D models were utilized on the different types of ore bodies, namely a sub-vertical discordant reef model for cross reefs, a sub-horizontal concordant reef model for leaders, topographical surficial reef model for eluvial deposits and a topographical TSF model for tailings and dumps. The modeling project led to a 146% increase in Mineral Resources at **Glynn's-Ladenburg**

The modeling project identified a number high grade, **shallow reef structures amenable to open pit mining**, specifically at Theta Hill, Browns Hill and Columbia Hill.

Project	Type of Potential	Comment
Rietfontein	Lateral and depth extensions	Lateral extension is possible to the south which is untested as well as at depth below the current historical mine
Beta	Lateral extension	Lateral extension of the main Beta "payshoot"
CDM	Lateral extension	Lateral extension to the south toward Dukes Hill south
Vaalhoek	Depth extensions and open pit opportunities	Near surface potential exists on the Vaalhoek reef and Thelma Leader reef
Glynn's Lydenburg	Shallow lateral extensions	The new model has identified new high grade exploration targets for possible near surface open pit opportunities
Theta and Browns Hill	Shallow lateral extensions	The new geological interpretation has identified Theta Hill and Browns Hill as potential open pit targets that are currently being drilled
Columbia Hill	Shallow lateral extensions	The new geological interpretation has identified Columbia Hill as potential open pit target that will be drilled

Theta Gold Mines (formerly Stonewall Resources) Press release May 1, 2018

The driver of the increase in the mineral resources in **September 2018** was the **Maiden Mineral Resource** for the **Theta Hill Open Cut Project**, which added 599,710 oz. Au to the total estimated mineral resource.

In May 2019, Theta Gold Mines upgraded the gold resource to a total of 6.026MM oz. grading at 4.18 g/t, of which 1.312MM ounces are open pit resources.

In April 2021, the company's **total gold resource** was again upgraded to a total of **6.1052 MM oz.** grading at 4.17 g/t. Of the total, 1.3638 MM ounces are open pit resources.

Estimated Total Mineral Resource

Resource Classification	Type of Operation	Combined Mineral Resource			
		Tonnage	Gold Grade	Gold Content	
		Mt	g/t	Kg	koz
Measured	Underground	0.091	5.37	489	15.7
	Open pit				
	Tailings				
Total Measured		0.091	5.37	489	15.7
Indicated	Underground	4.774	6.21	29 661	953.7
	Open Pit	8.109	2.14	17 364	558.2
	Tailings	5.244	0.83	4 373	140.6
Total Indicated		18.128	2.84	51 398	1652.5
Inferred	Underground	21.452	5.22	111 880	3597.0
	Open pit	4.907	5.11	25 057	805.6
	Tailings	0.023	0.57	13	0.4
	Rock Dump	0.885	1.20	1 059	34.0
Total Inferred		27.267	5.06	138 009	4 437.0
Grand Total		45.485	4.17	189 896	6 105.2

Theta Gold Mines Press Release April 8, 2021

FINANCINGS

To date, Theta Gold Mines has been successful in raising capital so that management has been able to continue advancing its Mine Development Strategy. **During fiscal 2020**, the company received **net proceeds of US\$5.73 million** from the placement of shares and the exercise of options resulting in the issuance of approximately 58,378,000 shares.

In late-July 2020, Theta Gold Mines closed an oversubscribed share placement and issued 16,667,084 ordinary shares priced at AUD\$0.24 per share. Gross proceeds were approximately AUD\$4,000,100 (USD\$2.81 million). The net proceeds were primarily targeted for the development of the Theta Open Pit Project. Sanlam Private Wealth acted as the lead manager of the placement. **During the first half of fiscal 2021, Theta Gold Mines raised US\$3,211,000** through share placements (including the placement described above) and the exercise of approximately 1,814,000 options.

In March 2021, the company issued 14,719,636 at AUD\$0.275 per share. Gross proceeds were approximately AUD\$4,048,000. Aura Capital Pty. and Spark Plus Pte. Ltd acted as the joint lead managers of the placement.

VALUATION

Managements of junior mineral exploration companies create value through evaluating, acquiring, exploring and/or developing mining properties. Management's **Integrated Mine Strategy** is to increase shareholder value by bringing the brownfield mines in the Pilgrims Rest and Sabie Gold Fields back into production using modern exploration, mining and processing techniques. After the refurbishment of the mill and processing plant, gold production from the Beta Mine is expected in the 2023 time frame.

Our calculation of **share value of attributable resources** is based on the ascertained net asset value of each property, which is determined by **adjusting the value of estimated resources for the expected recovery rate and mining/processing costs**. Also, the resources are assigned a **confidence factor** that attempts to take into account the risks of each project, such as the locality of the deposits, the assurance level of the resources, various technical mining/production risks, etc. The methodology also accounts for balance sheet adjustments for working capital and assets, such as property, plant and equipment, along with anticipated development capital costs. The resource valuation methodology involves the following assumptions:

- 1) An 85% confidence factor is applied to the development of the Beta Mine (Phase 1).
- 2) Even though the company's Maiden Reserve statement was able to convert 64% of the Indicated Resources to Reserve status, we conservatively attribute a 30% confidence factor to Indicated Resources.
- 3) Even though portions of the Inferred Resources are often prospective sources for potential Reserves, we do not incorporate Inferred Resources into our valuation model.
- 4) Upon being refurbished, we value the fair market value of the processing plant at US\$25,000,000
- 5) The capital costs to bring the properties to commercial production (along with other relevant figures, such as estimated production life, ore grade, recovery rate, etc.) are derived from the most recent, publicly available Reserve and Mineral Resource statements issued by the company.
- 6) A 12.5% discount rate is being applied in all of our Net Present Value (NPV) calculations.
- 7) The current gold price is used in our model.
- 8) Our asset value per share takes into account the dilutive effect of having options exercised below our target price.

Based on our calculation of share value of attributable resources (see table below), **our target for Theta Gold Mines stock is \$0.71.**

Theta Gold Mines Limited

Projects	Metal	Reserve/ Indicated (tonnes)	Grade Au (g/t)	In situ Metal Au (ozt)	Recovery Rate	Current Metal Price (\$US)	Royalties (\$US)	Adj. Net Value to TGM (\$US)	Net Present Value to TGM
Phase 1									
- Beta	Au	1,662,000	6.51	347,940	84.0%	1,816	3,822,600	447,848,459	247,731,354
- Frankfort	Au	319,000	4.13	42,330	84.0%	1,816	733,700	19,149,319	16,075,972
- CDM	Au	385,000	2.31	28,580	84.0%	1,816	885,500	8,541,355	6,418,058
Phase 2									
- Rietfontein	Au	1,420,000	8.20	242,200	84.0%	1,816	3,266,000	109,846,464	74,216,638
- Theta Hill et al	Au	5,267,000	2.29	387,900	84.0%	1,816	12,114,100	115,907,782	70,480,715
Processing Plant								25,000,000	25,000,000
BALANCE SHEET ADJUSTMENTS									
Working capital								(8,748,000)	(8,748,000)
Convertible notes								(198,000)	(198,000)
Provisions								(1,578,000)	(1,578,000)
Net proceeds from recent placements								2,688,142	2,688,142
Capital from Listed Options								0	0
Capital from Unlisted Options								3,065,875	3,065,875
Capital costs Phase 1								(78,500,000)	(55,501,058)
Net Assets & Resources								643,023,395	379,651,694
Shares Outstanding								503,245,666	503,245,666
Listed Options Outstanding								0	0
Unlisted Options Outstanding								12,798,000	12,798,000
Unlisted Performance Rights								21,320,000	21,320,000
Fully Diluted Shares								537,363,666	537,363,666
Asset Value								1.20	
Discounted Asset Value (\$US)									0.71

RISKS

- As with almost all junior resource exploration companies, currently Theta Gold Mines does not generate sufficient cash flow to adequately fund its developmental and exploration activities and is in need of additional capital to continue pursuing management's strategy. Nevertheless, the company has effectively funded its operations and initiatives to date.
- Shares outstanding increased significantly in fiscal 2017 (+20.7%), fiscal 2018 (+22.2%), fiscal 2019 (+56.5%) and fiscal 2020 (+13.4%) as capital from equity financings have funded the company's exploration and developmental activities, along with general corporate expenses. As a consequence, the company's share experienced a 10:1 consolidation (reverse split) in November 2018.
- As with any mineral company, the price of the targeted mineral is beyond management's control, in the case of Theta Gold Mines, the price of gold. Consequently, any significant movements in the price of gold would materially affect the outlook of the company.
- The project area is situated in one of the locales with the highest rainfall in South Africa, more than 1,200 mm per annum compared to the global average of 786 mm. Flooding can occur and has happened during the rainy season between October and April. Generally, underground and surface mining operations can continue during the rainy season; however, water ingress into the underground mines (flooding) has impeded gold production in the past, most recently in the first calendar quarter of 2014. Also, heavy rain can be problematic for heap leach operations.
- The Environmental Authorization process in South Africa is challenging, particularly the obligation to meet the requirements of the National Heritage Resources Act, including the need to address the concerns of Cultural Heritage Assessments.
- Operations may be adversely affected by labor disputes or changes in the labor laws either by work stoppages or increased employee expenses.
- The gold mineralization of the Pilgrims Rest and Sabie Goldfields is characterized by an assortment of gold mineralization styles, some highly irregular. As a result, certain challenges arise in the processing of ore that is naturally resistant to recovery by standard processes, primarily sulfide ore. Management is addressing the challenges of the gold mineralization styles by employing modern processing techniques. Significant advances have been made in gold recovery processes since the late 1960's, when large-scale mining was last conducted on the properties. Metallurgists have developed pre-treatment methods to effectively deal with gold ore that is resistant to extraction, which fall under the categories of crushing, washing, drying, chemical treatments, fractionalization and incineration. Among the specific methods are ultra-fine grinding; furnace roasting, bio-oxidation, chlorination, acid and alkaline pressure oxidation, and electrolytic oxidation, among others.

BALANCE SHEET

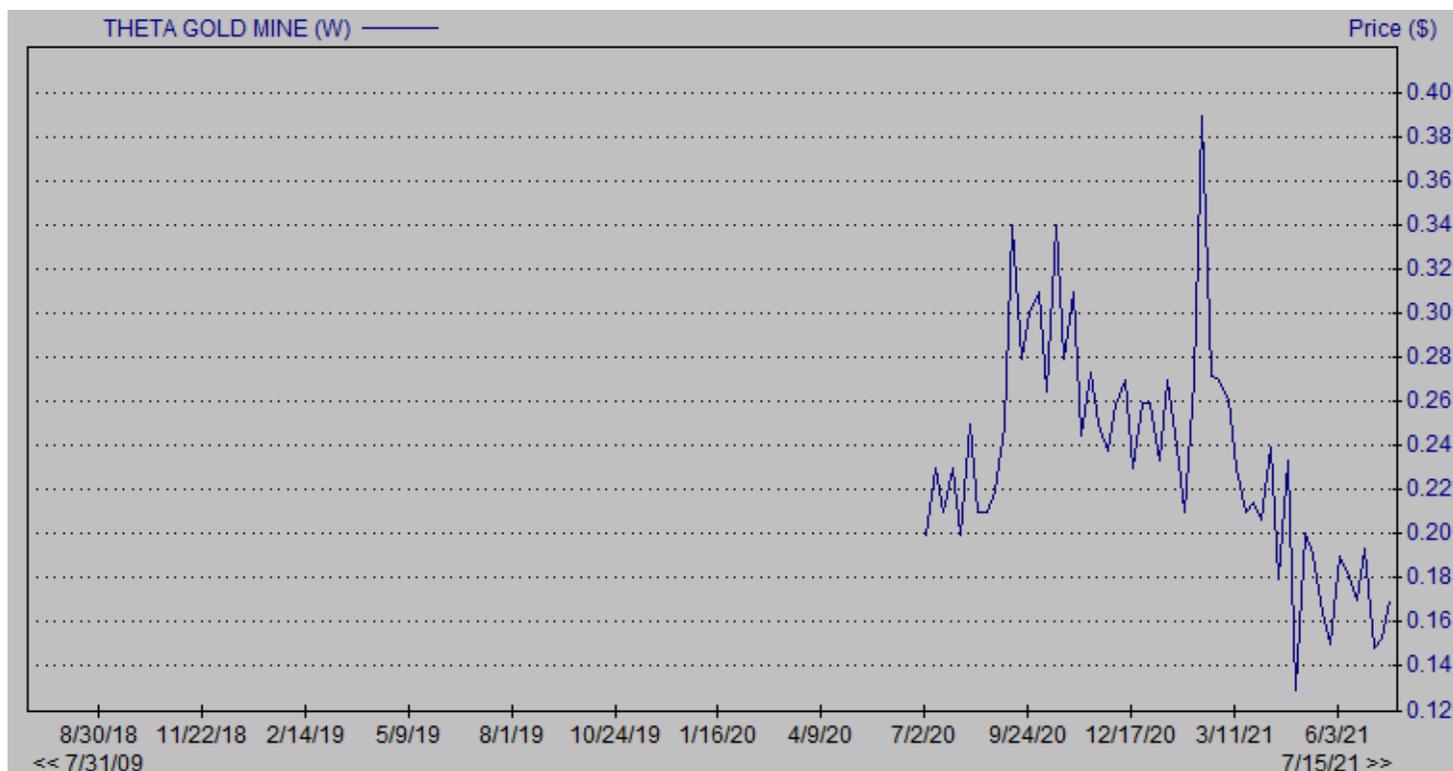
Theta Gold Mines Limited						
(in \$US '000 except ordinary share data)	2016	2017	2018	2019	2020	1 H 2021
Period ending	6/30/2016	6/30/2017	6/30/2018	6/30/2019	6/30/2020	12/31/2020
ASSETS						
Cash and cash equivalents	57	1,055	196	489	147	388
Accounts receivable	164	350	154	111	172	168
Inventories	139	-	-	-	-	-
Other financial assets	9	-	-	-	-	-
Non-current assets held for sale	132	-	507	64	-	-
Total Current Assets	501	1,405	857	664	319	556
Receivables	-	45	43	44	34	40
Other receivable	-	-	-	1,408	1,235	1,496
Property, plant and equipment	1,220	1,336	418	534	916	1,090
Capitalized exploration expenditures	8,494	9,604	10,771	12,375	11,379	14,491
Rehabilitation investment fund	1,176	1,356	1,378	0	0	0
TOTAL ASSETS	11,391	13,746	13,466	15,025	13,883	17,673
Trade and other payables	3,360	3,034	2,537	1,757	1,498	1,140
Provisions	299	489	344	411	828	922
Borrowings	6,183	2,226	7,002	5,195	5,775	7,242
Liabilities assoc. with assets held for sale	868	-	-	-	-	-
Total Current Liabilities	10,710	5,749	9,883	7,363	8,101	9,304
Provisions	269	6,322	211	1,688	1,578	1,901
Borrowings	1,170	1,195	1,362	178	106	104
Non-Current Liabilities	1,439	7,517	1,573	1,866	1,684	2,005
TOTAL LIABILITIES	12,149	13,266	11,456	9,229	9,785	11,309
SHAREHOLDERS' EQUITY						
Issued equity	57,692	61,997	67,316	75,629	81,349	84,323
Reserves	4,959	6,316	6,655	7,301	5,373	7,398
Accumulated losses	(60,578)	(67,833)	(71,961)	(77,134)	(82,624)	(85,357)
Non-controlling interest	(2,831)	-	-	-	-	-
Total Stockholders' Equity	(758)	480	2,010	5,796	4,098	6,364
TOTAL LIABILITIES & STOCKHOLDERS' EQ.	11,391	13,746	13,466	15,025	13,883	17,673
Ordinary shares outstanding	173,662,582	209,632,100	256,155,200	400,839,918	441,657,000	460,138,000

INCOME STATEMENT

Theta Gold Mines Limited						
Income Statement	2017	2018	2019	2020	2021 E	
(in \$US '000, except share out. data)	6/30/2017	6/30/2018	6/30/2019	6/30/2020	6/30/2021	
Interest and other income	65	106	94	122	76	
Fair value adjust't on convertible note	-	562	174	0	0	
Other income	134	103	46	109	138	
Total Revenues	199	771	314	231	214	
Administrative expenses	512	467	462	455	542	
Consultants expenses & prof. costs	1,090	351	310	694	736	
Employee and contractor expenses	2,616	2,032	1,452	1,726	1,718	
Depreciation	216	183	54	31	375	
Share-based payment	-	-	585	389	419	
Impairment of assets	360	108	996	204	0	
Provision for doubtful debts	409	-	-	-	-	
Other operating expenses	1,387	1,037	981	1,512	1,462	
Expenses	6,590	4,178	4,840	5,011	5,252	
(Loss) Before Other Income	(6,391)	(3,407)	(4,526)	(4,780)	(5,038.00)	
Loans	(524)	(623)	(625)	(710)	(853)	
Finance leases	(4)	(1)	0	0	0	
Convertible notes	(427)	(98)	(21)	0	0	
Total Other Income (Expenses)	(955)	(722)	(646)	(710)	(853)	
Net Loss	(7,346)	(4,129)	(5,172)	(5,490)	(5,891)	
Basic and diluted loss per ord. share	(0.0386)	(0.0182)	(0.0158)	(0.0128)	(0.0126)	
Wgted. Avg. Ord. Shares Out. - diluted	190,275,360	226,478,953	328,262,806	428,178,692	465,934,125	

Theta Gold Mines Limited						
Income Statement	1H 2020	2H 2020	2020	1H 2021	2H 2021 E	2021 E
(in \$US (000); share data (000))	12/31/2019	6/30/2020	6/30/2020	12/31/2020	6/30/2021	6/30/2021
Interest and other income	66	56	122	31	45	76
Other income	44	65	109	71	67	138
	110	121	231	102	112	214
Finance expenses	381	329	710	458	395	853
Impairment of assets	52	152	204	0	0	0
Salary expense	444	11	455	267	275	542
Share-based payments	572	(183)	389	369	50	419
Exploration expenses	325	2,095	2,420	454	2,000	2,454
Operating expenses	1,035	477	1,512	962	500	1,462
Other expenses	0	31	31	325	50	375
Expenses	2,809	2,912	5,721	2,835	3,270	6,105
Net Loss	(2,699)	(2,791)	(5,490)	(2,733)	(3,158)	(5,891)
Basic and diluted loss per ord. share	(0.0066)	(0.0064)	(0.0128)	(0.0061)	(0.0066)	(0.0126)
Wgted. Avg. Ord. Shares Out. - diluted	409,993	439,182	428,179	450,898	480,971	465,934

HISTORICAL STOCK PRICE



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ⁱ Fowler, A.R.C., Mining at Transvaal Gold Mining Estate s Limited 1872-1967 Journal of the South African Institute of Mining and Metallurgy, February 1968, page 331